

Preparations were also made for observations on April 8 and 9, but no measures could be obtained, as during the earlier part of the night *Saturn* was behind the new building (on which the Lassell Equatorial is shortly to be mounted), and the sky clouded over afterwards on each night.

Saturn and γ *Virginis* were also observed with the transit circle on April 10 and 12, and the following are the resulting differences of R.A. and N.P.D.:—

TABLE II.

G.M.T.	Observer.	γ^1 -Sat.		γ^2 -Sat.		γ^1 -Sat.		γ^2 -Sat.		Diameter.	
		R.A.		R.A.		N.P.D.		N.P.D.		R.A.	N.P.D.
d h m		m s		m s		' "		' "		s	
Apr. 10 11 18.0	R. C.	0	39.75	...		-2	0.55	'	...	1.16	19.71
12 11 9.6	H.	1	12.66	1	12.97	1	25.83	1	31.47	1.30	18.66

The N.P.D. differences are corrected for refraction and parallax.

The initials R. C. and H. are those of Mr. Cheeseman and Mr. Hollis.

Photographs of *Saturn* and γ *Virginis* were taken with the Astrographic Equatorial on April 7, 10, 12, and 13 with a series of exposures and trails for orientation.

Royal Observatory, Greenwich:
1893 April 14.

Revised Places of Comets observed at the Royal Observatory, Greenwich.

(Communicated by the Astronomer Royal.)

Since the comet observations in the *Monthly Notices*, vol. liii. Nos. 1 to 5, were communicated to the Society, more accurate places have been found for many of the comparison stars, chiefly in the Lund and Leiden zones. These places are given below, together with the resulting positions of the comets.

Holmes' Comet (f 1892).

Greenwich Mean Solar Time.					R.A. of \star .	N.P.D. of \star .	Comp. \star	References to <i>Monthly Notices</i> of R.A.S.		
1892.	d	h	m	s	h m s	° ' "				
Nov.	9	9	36	26	0 45 51.90	51 41 19.4	k	Vol. liii., No. 1, p. 52		
	9	11	22	53	0 45 52.51	51 41 33.1	g	" " "		
	10	6	17	48	0 45 23.61	51 46 12.6	k	" " "		
	10	6	17	48	0 45 26.10	51 45 51.7	e	" " "		
	10	6	25	3	0 45 27.30	51 45 48.6	e	" " "		
	12	8	27	17	0 44 28.31	51 59 11.2	e	" No. 2, p. 67		
	12	8	29	49	0 44 30.30	51 58 32.0	i	" " "		

Greenwich Mean Solar Time.					R.A. of ☿.	N.P.D. of ☿.	Comp. *	References to <i>Monthly Notices</i> of R.A.S.		
1892.	d	h	m	s	h	m	s			
Nov.	12	8	29	52	0 44 32.38	51 58 51.2	<i>i</i>	Vol. liii. No. 2, p. 67.		
	12	8	35	58	0 44 28.17	51 58 47.8	<i>e</i>	"	"	"
	14	6	21	19	0 43 45.65	52 9 12.7	<i>i</i>	"	"	"
	14	6	37	45	0 43 41.43	52 10 13.7	<i>d</i>	"	"	"
	14	6	43	58	0 43 47.03	52 10 22.5	<i>i</i>	"	"	"
	14	7	3	14	0 43 44.02	52 10 36.2	<i>d</i>	"	"	"
	14	7	27	0	0 43 42.23	52 10 42.4	<i>d</i>	"	"	"
	14	7	58	12	0 43 45.94	52 10 36.0	<i>e</i>	"	"	p. 68
	14	8	2	6	0 43 47.77	52 10 39.0	<i>e</i>	"	"	p. 67
	14	8	2	6	0 43 48.19	52 10 38.9	<i>f</i>	"	"	"
	17	8	50	30	0 42 51.64	52 29 37.4	<i>d</i>	"	"	p. 68
	18	6	5	48	0 42 38.28	52 35 21.9	<i>h</i>	"	"	"
	18	6	19	54	0 42 38.97	52 35 26.0	<i>d</i>	"	"	"
	18	7	25	21	0 42 30.97	52 36 24.9	<i>h</i>	"	"	"
	18	10	8	2	0 42 31.74	52 36 21.6	<i>d</i>	"	"	"
	20	6	20	17	0 42 19.72	52 48 8.7	<i>c</i>	"	"	"
	21	7	10	38	0 42 9.72	52 55 8.5	<i>c</i>	"	"	"
	21	8	9	47	0 42 9.43	52 56 45.5	<i>c</i>	"	"	"
	26	9	2	3	0 42 9.36	53 27 14.6	<i>b</i>	"	"	"
	26	9	15	49	0 42 10.06	53 27 26.5	<i>a</i>	"	"	"
1893.										
Jan.	20	9	27	41	1 27 2.17	56 21 7.8	<i>n</i>	"	No. 5, p. 344	
	24	9	24	19	1 32 33.70	56 19 34.1	<i>o</i>	"	"	"
Feb.	4	7	9	34	1 48 25.84	56 7 54.9	<i>p</i>	"	"	"
	4	8	36	20	1 48 35.32	56 8 20.9	<i>p</i>	"	"	"
	5	8	49	7	1 50 3.80	56 6 34.2	<i>p</i>	"	"	"
	5	9	42	12	1 50 10.24	56 7 18.0	<i>q</i>	"	"	"
	6	6	42	56	1 51 27.11	56 4 54.0	<i>q</i>	"	"	"
	6	7	14	24	1 51 30.97	56 5 0.5	<i>q</i>	"	"	"
	7	8	12	19	1 53 8.37	56 3 15.5	<i>q</i>	"	"	"
	8	7	6	17	1 54 34.97	56 1 27.1	<i>r</i>	"	"	345
	8	7	24	9	1 54 36.79	56 1 12.5	<i>q</i>	"	"	"
	10	7	41	29	1 57 44.16	55 58 18.1	<i>s</i>	"	"	"
	14	8	47	14	2 4 14.26	55 50 43.5	<i>t</i>	"	"	"
	15	9	50	59	2 5 51.84	55 48 31.4	<i>u</i>	"	"	"
	16	6	59	23	2 7 16.47	55 46 18.8	<i>u</i>	"	"	"
	16	7	5	18	2 7 15.82	55 46 24.4	<i>v</i>	"	"	"
<i>Brooks' Comet (g 1892).</i>										
1892.										
Dec.	15	14	26	11	13 51 16.50	57 42 23.6	<i>l</i>	Vol. liii., No. 3, p. 134		

April 1893.

observed at Greenwich.

379

Improved Mean Places of Comet Comparison Stars.

Star's Name.	R.A., 1892 ^o . h m s	N.P.D., 1892 ^o . ° ' "	Authority.
<i>a</i> W.B. (2) o, 1013	0 40 58.60	53 33 49.6	Lund Z., 320, 324
<i>b</i> W.B. (2), o, 1021	0 41 23.22	53 18 51.3	Lund Z., 335
<i>c</i> W.B. (2), o, 1029	0 41 47.88	52 57 30.5	Lund Z., 335
<i>d</i> Lalande, 1323	0 43 38.27	52 23 3.1	Lund Z., 310, 316, and 2 Paris Observations
<i>e</i> W.B. (2), o, 1083	0 44 5.98	51 50 56.7	Lund Z., 320, 324, 348, and 2 Pulkova Observations
<i>f</i> W.B. (2), o, 1087	0 44 10.90	51 52 45.6	Lund Z., 366, and 2 Pulkova Observations
<i>g</i> W.B. (2), o, 1092	0 44 27.12	51 43 16.7	Lund Z., 91, 98
<i>h</i> Lalande, 1384	0 45 16.77	52 32 39.3	Lund Z., 348, 366, and 2 Paris Observations
<i>i</i> Lalande, 1443	0 46 56.60	52 2 16.5	Lund Z., 320, 324, and 1 Paris Observation
<i>k</i> Lalande, 1444	0 47 1.87	51 32 55.4	Lund Z., 332, 356, and 1 Paris Observation
<i>l</i> Lalande, 25647*	13 51 8.34	57 36 7.3	Leiden Z., 46, 48

* The Lalande place for 1892^o should be N.P.D. 57° 35' 55" O, not 33'.

Star's Name.	R.A., 1893 ^o . h m s	N.P.D., 1893 ^o . ° ' "	Authority.
<i>n</i> Lalande, 2729	1 24 48.12	56 22 41.9	Leiden Z., 138, 242, 343, 398, and 2 Paris Observations
<i>o</i> B.D. + 33°, 267	1 32 31.66	56 11 46.5	Leiden Z., 343, 398
<i>p</i> W.B. (2), I., 1047	1 47 27.90	56 1 50.8	Leiden Z., 396, 398
<i>q</i> Lalande, 3619	1 52 44.39	56 10 50.2	Leiden Z., 393, 396, and 2 Paris Observations
<i>r</i> B.D. + 33°, 339	1 55 7.55	55 58 38.5	Leiden Z., 257, 325
<i>s</i> W.B. (2), I., 1292	1 56 27.37	55 51 18.6	Leiden Z., 260, 337
<i>t</i> B.D. + 34°, 382	2 3 35.10	55 41 33.1	Leiden Z., 239, 333
<i>u</i> Lalande, 4092	2 7 41.46	55 52 43.7	Leiden Z., 239, 333, and 1 Paris Observation
<i>v</i> B.D. + 34°, 396	2 8 0.13	55 35 29.8	Leiden Z., 239, 333

Royal Observatory, Greenwich:
1893 April 11.

Observations of Comets made at the Liverpool Observatory, 1892-93.
By William E. Plummer, M.A.

The following observations were made with the 8-inch equatoreal of the Liverpool Observatory, employing either a parallel wire micrometer, or an arrangement similar to that discussed by Colonel Tupman, *Monthly Notices*, vol. xlviii. p. 96, and known as the cross reticule. Of this latter form of micrometer, the observatory possesses two specimens, but neither is quite satisfactory in use. The principal defect seems to arise from the difficulty in destroying parallax, owing partially to the fact that the "cross wires," formed apparently of watch spring, are not in one and the same plane, and this difficulty seems to be aggravated by the low power of the eyepiece. Although all the precautions to which Colonel Tupman calls attention in his paper have been carefully attended to, it is feared that the places of the comets determined with this micrometer are not very trustworthy. They are marked by the abbreviation "Ret." I have in hand a series of observations to enable me to compare the relative accuracy of the determinations derived from the use of the "cross reticule" and the parallel wire micrometer, but the discrepancies in the results obtained on different nights are perplexing and inexplicable.